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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/535,226	03/24/2000	Mandy Mei-Feng Tsai	TI-29058	2779

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EXAMINER

SCHNEIDER, JOSHUA D

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/535,226	Applicant(s) TSAI, MANDY MEI-FENG	
	Examiner Joshua D. Schneider	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 9/26/2005 have been fully considered but they are not persuasive.
2. Examiner first notes the objection to the previous rejection under requirements of 37 CFR § 1.104(c)(2). The inclusion of a column worth of material in citing Helen was due to the nature of the material. Helen essentially recites the state of the art and a single claim. This material is used to teach the storing buffer conditions and using these conditions to make decisions for making transfers. The text in Nakamura is extensive due to the verbosity of the reference and the many analogous teachings storing buffer conditions and using these conditions to make decisions for making transfers. It was not thought by the examiner that any of these teachings were complex in nature. Scanning the cited figures, the limitation claimed in the instant application is found in Fig. 13, in the elements of the state diagram labeled Status 6 and Status 7. The limitation of a copy/access controller connected to said first buffer, said second buffer, and said second component and operable to copy data from said first buffer to said second buffer when said first buffer is substantially full, and further operable to prompt said second component to access said second buffer when said data is copied from said first buffer, is shown by the loop back to Status 6 when the FIFO buffer is not full and the transferring of data in Status 7 from the FIFO buffer to buffer memory after a full condition is found.
3. Applicant explains that it is difficult to respond to a rejection, which cites plural columns of a reference in anticipating claimed elements. However, this is not a case of anticipation, but rather an obvious rejection. It should be appreciated that a good deal of extra citation is often

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necessary to establish obviousness, in order to resolve the level of skill in the art and full teachings of the prior art of record in order to determine the obviousness or nonobviousness of claims as per the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). This case makes clear that the scope and content of the prior art are necessarily factored into a determination of obviousness or nonobviousness. The rejection has been more narrowly pointed to the teachings of the steps that most explicitly teach the limitations applicant contends are not obvious, though other sections of the reference may be necessary to understand the context of the explicit teachings.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,463,443 to Frankel et al. in further view of U.S. Patent 4,616,338 to Helen et al. and U.S. Patent 5,832,308 to Nakamura et al.

6. With regards to claims 1 and 11, Frankel teaches a first buffer connected to a first component operating at a first clock rate (Fig. 1, element 10, column 1, lines 61-65), a second buffer connected to a second component operating at a second clock rate (Fig. 1, element 14, column 2, lines 1-5), and a copy/access controller for copying data from the first buffer to the second buffer when the first buffer is substantially full (Fig. 1, elements 16, 16a, 18, 20, and 22, column 1, lines 65-68, column 4, lines 34-46, and column 5, lines 53-58). Frankel fails to

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explicitly teach the prompting of a second component to access the second buffer when the data is copied from the first buffer. It should be seen that the writing of data to the output shift register is inherently a prompt to the second component to read data out, as writing output data to the register will cause the second component to read data out according to its own second clock signal. Helen teaches a buffer system similar to Frankel and explicitly teaches the indication of data ready for output to the second component (column 1, line 15, through column 2, line 28). Nakamura teaches the type of system discussed in the prior art of both Helen and Frankel, but also teaches that it was well known at the time of invention to use fullness indication and send signals to a prompt output to a second component when a full transfer status is found (Figs. 11 and 13, column 20, line 35, through column 23, lines 17, especially Fig. 13, Status 6 and 7, column 21, line 65, through column 22, line 6, and column 22, lines 41-60, and prompt to second component in Status 8, column 22, lines 7-16). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the output buffer ready status signaling of Helen and Nakamura with the buffering control of Frankel to provide a complete asynchronous control between components of different data rates.

7. With regards to claims 2 and 13, the Frankel teaches that random access memories were well known in the art (Fig. 2A). It is inherent that shift registers are by definition also RAM memories.

8. With regards to claims 3 and 12, Frankel teaches that shift registers were well known in the art (Figs. 2A and 2B).

9. With regards to claims 4 and 14, the advantages of integrating circuits onto a single semiconductor are well known in the art. It would have been obvious to one of ordinary skill in

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the art at the time of invention that the circuit could have been integrated onto a single semiconductor with either the first or second component in order to decrease spatial requirements and the number of wiring connections.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

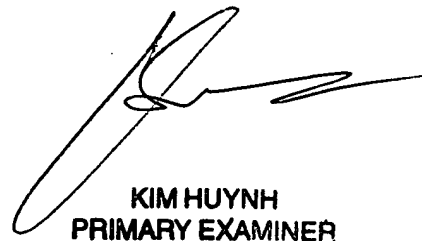
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Schneider whose telephone number is (571) 272-4158. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JDS



KIM HUYNH
PRIMARY EXAMINER

10/22/05